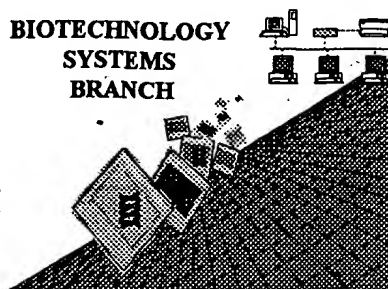


0590
0102

BIOTECHNOLOGY
SYSTEMS
BRANCH



RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/965,116
Source: O/PE
Date Processed by STIC: 12/20/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER**
VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by the treatment given to all mail coming via the Brentwood Mail Facility.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom, including:

1. EFS-Bio (<http://www.uspto.gov/efb/efs/downloads/documents.htm>), EFS Submission User Manual - ePAVE)

2. U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202

3. Hand Carry directly to:

U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name,
1911 South Clark Street, Crystal Mall One, Sequence Information, Arlington, VA 22202

Or

U.S. Patent and Trademark Office, 2011 South Clark Place, Customer Window, Box Sequence, Crystal Plaza Two,
Lobby, Room 1B03, Arlington, Virginia 22202

4. Federal Express Delivery, 2011 South Clark Street, Crystal Plaza 2, Room 1B03-Mailroom, Box Sequence,
Arlington, VA 22202

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER: 09/965,116

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleics
 Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 Misaligned Amino
 Numbering The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 Variable Length Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 PatentIn 2.0
 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 Skipped Sequences
 (OLD RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 Skipped Sequences
 (NEW RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence.
<210> sequence id number
<400> sequence id number
000
- 9 Use of n's or Xaa's
 (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 Invalid <213>
 Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 Use of <220> Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses.
Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 PatentIn 2.0
 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 Misuse of n n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.

OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/965,116

DATE: 12/20/2001
TIME: 13:19:16

Input Set : A:\47508-577.ST25.txt
Output Set: N:\CRF3\12202001\I965116.raw

op 1-5
**Does Not Comply
Corrected Diskette Needed**

3 <110> APPLICANT: Kandimalla, Ekambar R.
4 Zhao, Qiuyan
5 Yu, Dong
6 Agrawal, Sudhir
8 <120> TITLE OF INVENTION: Modulation of Immunostimulatory Activity of
Immunostimulatory
9 Oligonucleotide Analogs by Positional Chemical Changes
11 <130> FILE REFERENCE: HYZ-479CP (47508.577)
13 <140> CURRENT APPLICATION NUMBER: US 09/965,116
14 <141> CURRENT FILING DATE: 2001-09-26
16 <150> PRIOR APPLICATION NUMBER: US 09/712,898
17 <151> PRIOR FILING DATE: 2000-11-15
19 <150> PRIOR APPLICATION NUMBER: US 60/235,452
20 <151> PRIOR FILING DATE: 2000-09-26
22 <150> PRIOR APPLICATION NUMBER: US 60/235,453
23 <151> PRIOR FILING DATE: 2000-09-26
25 <160> NUMBER OF SEQ ID NOS: 112
27 <170> SOFTWARE: FastSEQ for Windows Version 4.0
29 <210> SEQ ID NO: 1
30 <211> LENGTH: 18
31 <212> TYPE: DNA
32 <213> ORGANISM: Artificial Sequence
34 <220> FEATURE:
35 <223> OTHER INFORMATION: oligonucleotide
37 <400> SEQUENCE: 1
38 ctatctgacg ttctctgt
40 <210> SEQ ID NO: 2
41 <211> LENGTH: 18
42 <212> TYPE: DNA
43 <213> ORGANISM: Artificial Sequence
45 <220> FEATURE:
46 <223> OTHER INFORMATION: oligonucleotide
48 <221> NAME/KEY: modified_base
49 <222> LOCATION: 9
50 <223> OTHER INFORMATION: c = 5-hydroxydeoxycytidine
52 <400> SEQUENCE: 2
53 ctatctgacg ttctctgt
55 <210> SEQ ID NO: 3
56 <211> LENGTH: 18
57 <212> TYPE: DNA
58 <213> ORGANISM: Artificial Sequence
60 <220> FEATURE:
61 <223> OTHER INFORMATION: oligonucleotide
63 <221> NAME/KEY: modified_base
64 <222> LOCATION: 10
65 <223> OTHER INFORMATION: c = 5-hydroxydeoxycytidine
67 <400> SEQUENCE: 3
68 ctatctgacc ttctctgt

18

18

18

*insufficient explanation - give source
of genetic
material -
see item 11
on End
summary
sheet*

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/965,116

DATE: 12/20/2001

TIME: 13:19:16

Input Set : A:\47508-577.ST25.txt

Output Set: N:\CRF3\12202001\I965116.raw

70 <210> SEQ ID NO: 4
71 <211> LENGTH: 18
72 <212> TYPE: DNA
73 <213> ORGANISM: Artificial Sequence
75 <220> FEATURE:
76 <223> OTHER INFORMATION: oligonucleotide
78 <221> NAME/KEY: modified_base
79 <222> LOCATION: 9
80 <223> OTHER INFORMATION: c = N4-ethyldeoxycytidine
82 <400> SEQUENCE: 4
83 ctatctgacg ttctctgt 18
85 <210> SEQ ID NO: 5
86 <211> LENGTH: 18
87 <212> TYPE: DNA
88 <213> ORGANISM: Artificial Sequence
90 <220> FEATURE:
91 <223> OTHER INFORMATION: oligonucleotide
93 <221> NAME/KEY: modified_base
94 <222> LOCATION: 10
95 <223> OTHER INFORMATION: c = N4-ethyldeoxycytidine
97 <400> SEQUENCE: 5
98 ctatctgacc ttctctgt 18
100 <210> SEQ ID NO: 6
101 <211> LENGTH: 16
102 <212> TYPE: DNA
103 <213> ORGANISM: Artificial Sequence
105 <220> FEATURE:
106 <223> OTHER INFORMATION: oligonucleotide
108 <400> SEQUENCE: 6
109 aaggtcgagc gttctc 16
111 <210> SEQ ID NO: 7
112 <211> LENGTH: 18
113 <212> TYPE: DNA
114 <213> ORGANISM: Artificial Sequence
116 <220> FEATURE:
117 <223> OTHER INFORMATION: oligonucleotide
119 <400> SEQUENCE: 7
120 atggcgacg ctgggaga 18
122 <210> SEQ ID NO: 8
123 <211> LENGTH: 18
124 <212> TYPE: DNA
125 <213> ORGANISM: Artificial Sequence
127 <220> FEATURE:
128 <223> OTHER INFORMATION: oligonucleotide
130 <400> SEQUENCE: 8
131 cctactagcg ttctcatc 18
133 <210> SEQ ID NO: 9
134 <211> LENGTH: 18
135 <212> TYPE: DNA

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/965,116

DATE: 12/20/2001

TIME: 13:19:16

Input Set : A:\47508-577.ST25.txt

Output Set: N:\CRF3\12202001\I965116.raw

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136 <213> ORGANISM: Artificial Sequence
138 <220> FEATURE:
139 <223> OTHER INFORMATION: oligonucleotide
141 <221> NAME/KEY: modified_base
142 <222> LOCATION: 10
143 <223> OTHER INFORMATION: g = 1',2'-Dideoxyribose
145 <400> SEQUENCE: 9
146 cctactagcg ttctcatc 18
148 <210> SEQ ID NO: 10
149 <211> LENGTH: 18
150 <212> TYPE: DNA
151 <213> ORGANISM: Artificial Sequence
153 <220> FEATURE:
154 <223> OTHER INFORMATION: oligonucleotide
156 <221> NAME/KEY: modified_base
157 <222> LOCATION: 8
158 <223> OTHER INFORMATION: g = 1',2'-Dideoxyribose
160 <400> SEQUENCE: 10
161 cctactagcg ttctcatc 18
163 <210> SEQ ID NO: 11
164 <211> LENGTH: 18
165 <212> TYPE: DNA
166 <213> ORGANISM: Artificial Sequence
168 <220> FEATURE:
169 <223> OTHER INFORMATION: oligonucleotide
171 <221> NAME/KEY: modified_base
172 <222> LOCATION: 7
173 <223> OTHER INFORMATION: a = 1',2'-Dideoxyribose
175 <400> SEQUENCE: 11
176 cctactagcg ttctcatc 18
178 <210> SEQ ID NO: 12
179 <211> LENGTH: 18
180 <212> TYPE: DNA
181 <213> ORGANISM: Artificial Sequence
183 <220> FEATURE:
184 <223> OTHER INFORMATION: oligonucleotide
186 <221> NAME/KEY: modified_base
187 <222> LOCATION: 6
188 <223> OTHER INFORMATION: t = 1',2'-Dideoxyribose
190 <400> SEQUENCE: 12
191 cctactagcg ttctcatc 18
193 <210> SEQ ID NO: 13
194 <211> LENGTH: 18
195 <212> TYPE: DNA
196 <213> ORGANISM: Artificial Sequence
198 <220> FEATURE:
199 <223> OTHER INFORMATION: oligonucleotide
201 <221> NAME/KEY: modified_base
202 <222> LOCATION: 5

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RAW SEQUENCE LISTING

DATE: 12/20/2001

PATENT APPLICATION: US/09/965,116

TIME: 13:19:16

Input Set : A:\47508-577.ST25.txt

Output Set: N:\CRF3\12202001\I965116.raw

```

203 <223> OTHER INFORMATION: c = 1',2'-Dideoxyribose
205 <400> SEQUENCE: 13
206 cctactagcg ttctcatc 18
208 <210> SEQ ID NO: 14
209 <211> LENGTH: 18
210 <212> TYPE: DNA
211 <213> ORGANISM: Artificial Sequence
213 <220> FEATURE:
214 <223> OTHER INFORMATION: oligonucleotide
216 <221> NAME/KEY: modified_base
217 <222> LOCATION: 4
218 <223> OTHER INFORMATION: a = 1',2'-Dideoxyribose
220 <400> SEQUENCE: 14
221 cctactagcg ttctcatc 18
223 <210> SEQ ID NO: 15
224 <211> LENGTH: 18
225 <212> TYPE: DNA
226 <213> ORGANISM: Artificial Sequence
228 <220> FEATURE:
229 <223> OTHER INFORMATION: oligonucleotide
231 <221> NAME/KEY: modified_base
232 <222> LOCATION: 4
233 <223> OTHER INFORMATION: a = 1',2'-Dideoxyribose
235 <400> SEQUENCE: 15
236 cctactagcc ttctcatc 18
238 <210> SEQ ID NO: 16
239 <211> LENGTH: 18
240 <212> TYPE: DNA
241 <213> ORGANISM: Artificial Sequence
243 <220> FEATURE:
244 <223> OTHER INFORMATION: oligonucleotide
246 <221> NAME/KEY: modified_base
247 <222> LOCATION: 11
248 <223> OTHER INFORMATION: t = 1',2'-Dideoxyribose
250 <400> SEQUENCE: 16
251 cctactagcg ttctcatc 18
253 <210> SEQ ID NO: 17
254 <211> LENGTH: 18
255 <212> TYPE: DNA
256 <213> ORGANISM: Artificial Sequence
258 <220> FEATURE:
259 <223> OTHER INFORMATION: oligonucleotide
261 <221> NAME/KEY: modified_base
262 <222> LOCATION: 12
263 <223> OTHER INFORMATION: t = 1',2'-Dideoxyribose
265 <400> SEQUENCE: 17
266 cctactagcg ttctcatc 18
268 <210> SEQ ID NO: 18
269 <211> LENGTH: 18

```

RAW SEQUENCE LISTING

DATE: 12/20/2001

PATENT APPLICATION: US/09/965,116

TIME: 13:19:16

Input Set : A:\47508-577.ST25.txt

Output Set: N:\CRF3\12202001\I965116.raw

```

270 <212> TYPE: DNA
271 <213> ORGANISM: Artificial Sequence
273 <220> FEATURE:
274 <223> OTHER INFORMATION: oligonucleotide
276 <221> NAME/KEY: modified_base
277 <222> LOCATION: 13
278 <223> OTHER INFORMATION: c = 1',2'-Dideoxyribose
280 <400> SEQUENCE: 18
281 cctactagcg ttctcatc 18
283 <210> SEQ ID NO: 19
284 <211> LENGTH: 18
285 <212> TYPE: DNA
286 <213> ORGANISM: Artificial Sequence
288 <220> FEATURE:
289 <223> OTHER INFORMATION: oligonucleotide
291 <221> NAME/KEY: modified_base
292 <222> LOCATION: 14
293 <223> OTHER INFORMATION: t = 1',2'-Dideoxyribose
295 <400> SEQUENCE: 19
296 cctactagcg ttctcatc 18
298 <210> SEQ ID NO: 20
299 <211> LENGTH: 18
300 <212> TYPE: DNA
301 <213> ORGANISM: Artificial Sequence
303 <220> FEATURE:
304 <223> OTHER INFORMATION: oligonucleotide
306 <221> NAME/KEY: modified_base
307 <222> LOCATION: 4, 5
308 <223> OTHER INFORMATION: ac = 1',2'-Dideoxyribose
310 <400> SEQUENCE: 20
311 cctactagcg ttctcatc 18
313 <210> SEQ ID NO: 21
314 <211> LENGTH: 18
315 <212> TYPE: DNA
316 <213> ORGANISM: Artificial Sequence
318 <220> FEATURE:
319 <223> OTHER INFORMATION: oligonucleotide
321 <221> NAME/KEY: modified_base
322 <222> LOCATION: 1, 2
323 <223> OTHER INFORMATION: cc = 1',2'-Dideoxyribose
325 <400> SEQUENCE: 21
326 cctactagcg ttctcatc 18
328 <210> SEQ ID NO: 22
329 <211> LENGTH: 18
330 <212> TYPE: DNA
331 <213> ORGANISM: Artificial Sequence
333 <220> FEATURE:
334 <223> OTHER INFORMATION: oligonucleotide
336 <221> NAME/KEY: modified_base

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The types of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/965,116

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Input Set : A:\47508-577.ST25.txt

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